

## MULTIDIMENSIONAL OPTICAL GRATINGS

### ABSTRACT

Multi-dimensional optical gratings (600, 700) of a background material (602, 702, 802) having a first refractive index and cells (604, 704, 804) of at least one different refractive index. The cells (604, 704, 804) may occupy two-dimensional or three-dimensional grids, defining the optical gratings as planar gratings (600) or cubical gratings (700), and thus providing two or three sets of surface-to-surface separations, or thicknesses, and cell-to-cell separations. The respective sets of surface-to-surface separations and cell-to-cell separations used may particularly be selected according to Bragg's law to selectively scatter respective light wavelengths.